

Title (en)
Electromagnetic unit fuel injector.

Title (de)
Elektromagnetisch gesteuerte Pumpen-Düsen-Einheit.

Title (fr)
Injecteur-pompe combiné à commande électromagnétique.

Publication
EP 0121300 A2 19841010 (EN)

Application
EP 84300644 A 19840202

Priority
US 48179283 A 19830404

Abstract (en)
An electromagnetic unit fuel injector for use in a diesel engine includes a housing (1 min) with a pump therein defined by an externally actuated plunger (3 min) reciprocable in a bushing (2 min) and defining therewith a pump chamber (8 min) open at one end for the discharge of fuel to a spring-biased, pressure-actuated fuel injection nozzle (97). The pump chamber (8 min) is also connected to a spill chamber (46 min) via a solenoid-actuated, normally open, hollow, ported valve-controlled passage (51 min) to permit the ingress and egress of fuel. The spill chamber (46 min) adjacent to a head end (56 min) of the valve (55 min) is in flow communication with a supply chamber (38 min) at the opposite end of the valve (55 min) and these chambers are connected to a drain passage (50 min) and supply passage (48 min), respectively and are interconnected to each other by the valve (55 min) and by a second passage (34 min) in parallel with the hollow valve (55 min). The poppet valve (55 min) is provided with a pressure assist plunger (58g min) next adjacent to the head (56 min) of the valve (55 min) in the spill chamber (46 min) so as to be acted upon by spill fuel to effect more rapid opening of the valve (55 min). During a pump stroke, the solenoid (70 min) can be energized to move the valve (55 min) in position to block flow from the pump chamber (8 min) to the spill chamber (46 min) so as to allow the pressurization of fuel by the pump to effect discharge of fuel from the injection nozzle (97).

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IPC 8 full level
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CPC (source: EP US)
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Cited by
EP0195261A3; GB2262782A; GB2262782B

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DE FR GB SE

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US 4470545 A 19840911; CA 1202848 A 19860408; DE 3472703 D1 19880818; EP 0121300 A2 19841010; EP 0121300 A3 19860326; EP 0121300 B1 19880713; JP S59194073 A 19841102

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